

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 13 to 26.

Claims 13-21 and 23-26 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Moens (U.S. 5,397,641) in view of Kaplan (U.S. 6,313, 234).

This rejection is respectfully traversed.

Main claim 13 of the present application relates to a powder composition with three features:

- from 40 to 90 parts by weight of a carboxy functional polyester consisting of an amorphous polyester;
- from 10 to 60 parts by weight of a specific glycidyl group containing acrylic copolymer; and
- from 0.5 to 15 parts by weight of a curing agent having functional groups reactable with the polyester's carboxylic functional groups.

Moens '641 does not disclose amorphous carboxyl functional polyesters (PE). The morphology of the polyesters described therein is undisclosed but likely (given they form coatings of high gloss, see Table III of Moens '641) to be a semi-crystalline or crystalline PE. The thermosetting coating compositions described in Moens '641 use specific glycidyl functional acrylic copolymers as the curing (cross-linking) agent. Moens '641 does not disclose use of an additional curing agent reactable with the polyester's carboxylic groups.

Moens '641 addresses a different problem than that of the present application.

Moens '641 relates to the problem of replacing triglycidyl isocyanurate (TGIC) cross-linkers in powder paints due to their perceived toxicity problems (col. 1, lines 64-68). Moens '641 goes on to teach that the TGIC replacements should result in powder compositions of similar performance as with the TGIC.

Moens '641 notes there are problems in prior art formulations that use glycidyl functional acrylic polymers to replace TGIC. It teaches that a specific formulation is essential to solve this.

Further objectives of Moens '641 include achieving "excellent surface characteristics" (col. 2, line 46) and "coatings with a high gloss" (see col. 13, lines 37 to 38).

Thus, the Official Action at page 2 incorrectly states that Moens '641 and the present invention describe powder compositions "taught for the same purpose". The problem addressed by the present invention is not to replace "toxic" TGIC but to provide powder coatings of reduced gloss (i.e. matte finish) while maintaining the desired flow, mechanical properties and solvent and weathering resistance that can be achieved with high gloss coatings. The PE's used in the present invention are amorphous.

Thus there would be no motivation for a reader of Moens '641 to use amorphous PE to prepare the powder coatings thereof as this is not relevant to replacing the TGIC. Indeed as this would reduce the gloss of the coatings there would be a disincentive for a skilled reader of Moens '641 to use amorphous PE.

Moens '641 describes a different polyester.

Moens '641 goes on to teach that powders with a carboxy functional PE and a glycidyl functional acrylic cross-linker replacing the TGIC will achieve the desired objective of Moens '641 but only:

"**on the condition** that the polyester has the following **essential** characteristics... its preparation **must** take place in two steps (preparing of OH functional PE without **1,4-cyclohexanedicarboxylic acid** [CHDCA] and esterification of OH groups of PE with DHDCA) its **composition is very specific**, at least **75% mole of terephthalic acid** [TPA], at least **10 mole % of** [CHDCA] and at most **14 mole % of at least one other .. polycarboxylic acid**". (col. 2, lines 56 to col. 3, line 3).

Moens '641 further confirms that these features are essential (see also col. 4, lines 26 to 38).

Thus a reader of Moens '641 is deterred from formulating powder compositions outside the specified ranges taught (e.g. using less than 75% IPA or less than 10% CHDCA or more than 14% of another polyacid).

Moens '641 also teaches that high gloss is desirable. See Abstract. Thus a reader of this reference would not ignore this teaching and would have no reason to prepare amorphous PE or formulate powders with similar properties to those used in the present invention.

The two diols specified in the present invention are neopentyl glycol (NPG) and/or 2-butyl-2-ethyl-1,3-propane diol (BEPD). Moens '641 lists NPG and BEPD (col. 5., lines 3 to 9) as only two out of 16 possible diols. The rejection suggests no motivation for a reader of Moens '641 to select these two diols specifically to prepare a PE rather than any of the other 14 listed. Indeed and arguably, Moens '641 teaches away from using NPG alone or in combination with BEPD as (col. 5, lines 14 to 20) suggests NPG should be used in combination with tri and/or tetrahydric aliphatic polyols. This provides a further disincentive for a reader of Moens '641 to obtain the PEs with the properties necessary for the present invention.

Moens '641 teaches against using additional curing agent.

A reader of Moens '641 is taught directly against using additional curing agents (other than the glycidyl functional acrylic polymers) to replace the TGIC. For example, Moens '641 states:

"The carboxyl-terminated polyester (a) and the glycidyl group containing acrylic polymer (b), together form the basic binder for the thermosetting powder compositions according to the invention". (col. 7, lines 34 to 37).

The rejection provides no reason why an art skilled reader of Moens '641 would ignore this teaching to arrive at the present invention.

There is no motivation to combine Kaplan with Moens '641.

A reader of Moens '641 would be actively deterred from referring to generic powder compositions described in Kaplan (for the other secondary references) given the specific formulation is said to be essential. Even if a reader of Moens '641 did consult other documents they would seek out features to address a different problem to that solved by the present invention. There is no likelihood that a feature suitable for replacing TGIC as a curing agent in a high gloss powder formulation would be relevant to producing the presently claimed powders with reduced gloss.

Given that the process for preparing the powders of Moens '641 and the present invention are different and they are designed for different purposes, the rejection (page 3) has no basis for

assuming that other properties such as T_g ranges (e.g. present claims 18 and 21) would be inherently the same.

In this regard, inherency and obviousness are very different issues. See *In re Rineheart*, 189 USPQ 143 at 148 [9](CCPA 1976). A rejection on *obviousness* should not be based on inherency

A reader of Moens '641 Would Not Consult Kaplan.

Kaplan does not address the problem identified in Moens '641 but instead attempts to provide powder compositions having improved aging. So there is no reason why a reader of Moens '641 would also read Kaplan. Although Kaplan does teach use of a polyepoxy cross-linker may be mixed with the carboxy functional polyester, the specified polyepoxy compounds mentioned (col. 2, lines 58-63) are a glycidyl ether of cyanuric or isocyanuric acid of a glycidyl ester of a polycarboxylic acid. Kaplan does not disclose any acrylic copolymers that contain glycidyl groups. But Moens '641 addresses the problem of replacing such TGIC type cross-linkers because they are stated to be toxic, so there is an active disincentive for a reader of Moens '641 to use any of the elements of the formulations described in Kaplan.

The rejection incorrectly states at page 4 that a reader of Moens '641 would have imported the feature of a beta hydroxy alkyl amide from Kaplan to modify the compositions of Moens '641 simply because this amide is a curing agent and Moens '641 teaches curing agents generically. However, Moens '641 uses a completely different type of curing agent the glycidyl functional acrylic polymer.

As discussed above, Moens '641 deters a reader from making significant changes to the compositions described therein and teaches away from using any other type of cross-linker to replace the TGIC.

A reader of Moens '641 would not simply import an arbitrary feature from Kaplan, contrary to the teaching therein.

These arguments suggest the rejection is relying on hindsight to arrive at the present invention.

Claim 22 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Moens and Kaplan in view of Hoebeka (U.S. 5,525,370).

This rejection is also respectfully traversed.

For the reasons given above, a skilled reader of Moens '641 would not consult Kaplan.

There is even less reason to combine Moens '641 with Kaplan and Hoebeke. In particular one cannot "import" a missing element i.e. an Mn value in claim 22, by arbitrarily selecting that element from Hoebeke, out of context and without any motivation or to refer to that document or select that out of many other features.

Hoebeke addresses the problem of matte coatings. Therefore starting with Moens '641 high gloss coatings (combined with Kaplan or not), there would be a disincentive for a person trying to replace TGIC in a high gloss powder coating to refer to a document (Hoebeke) relating to matte powder coatings. Furthermore Hoebeke does not teach use of further curing agents in addition to the glycidyl group containing acrylic copolymer.

Accordingly, the rejection over Moens '641 and Kaplan in view of Hoebeke is untenable.

Claim 22 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Moens and Kaplan in view of Knoops (WO 02055620).

This rejection also respectfully traversed.

For the reasons discussed above, this rejection is also based on an arbitrary selection of features from the cited references.

Knoops addresses the problem of matte coatings (similar to that of the present invention but different to that addressed by Moens '641). Therefore starting with Moens '641 (combined with Kaplan or not) there would be a disincentive for a person trying to replace TGIC in a high gloss powder coating to refer to a Knoops) relating to matte powder coatings.

In any event, Knoops teaches that the polyesters described therein must be semi-crystalline. These are different from the amorphous PE used in the present claims. Thus, the combination of Moens, Kaplan and/or Knoops would not lead one of ordinary skill in the art to claim 22.

For the foregoing reasons, it is apparent that all the rejections are based on an improper hindsight reconstruction of the present invention by arbitrary selection of features from the cited references, which references do not even share the same objectives.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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